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FIG. 1

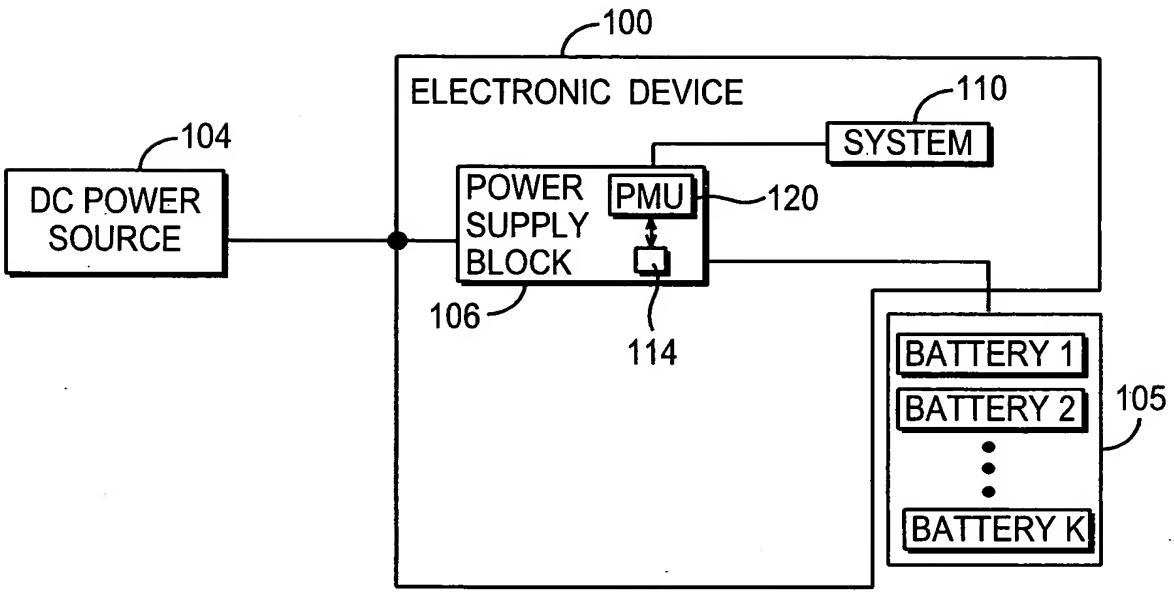

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FIG. 2

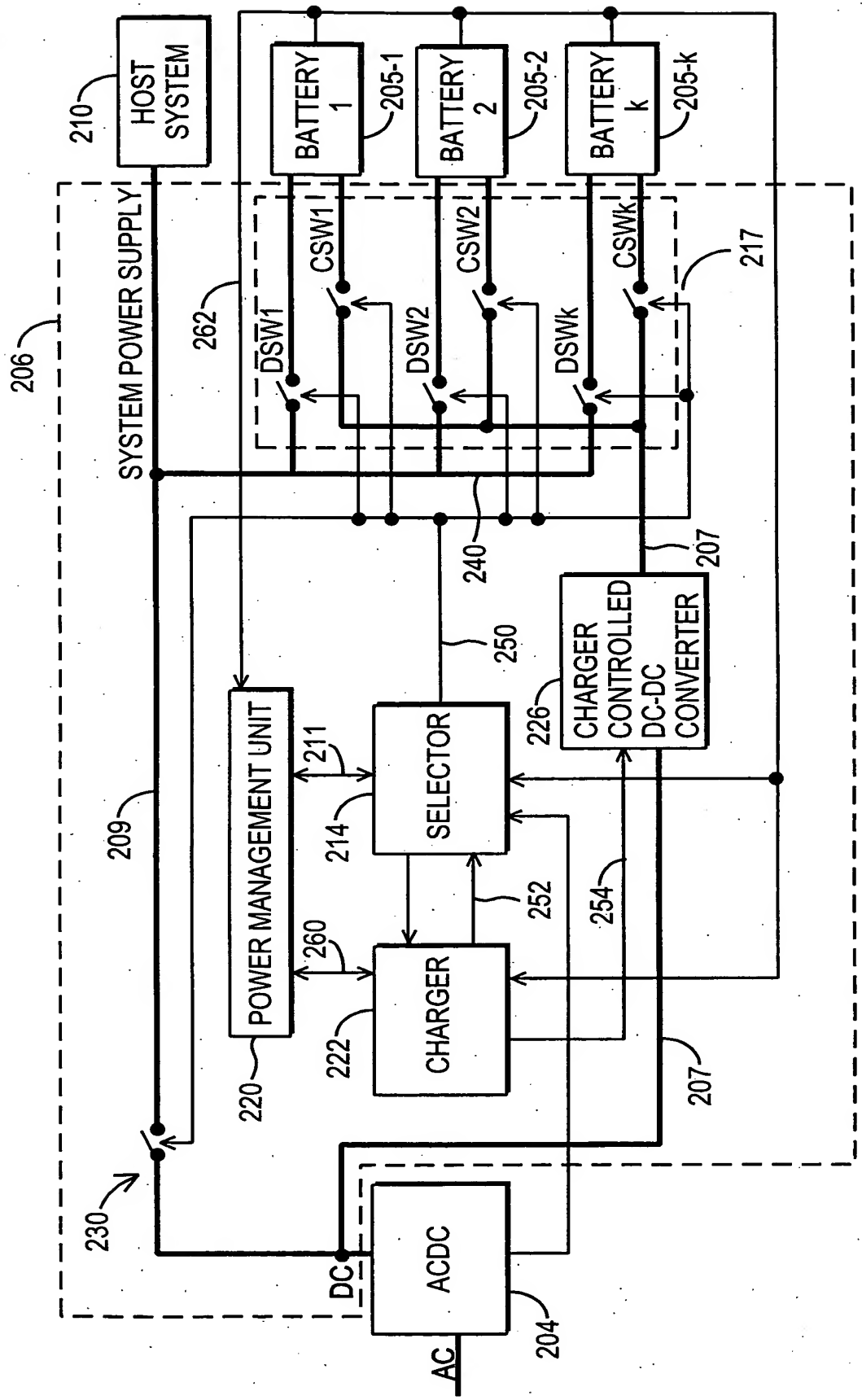

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FIG. 3

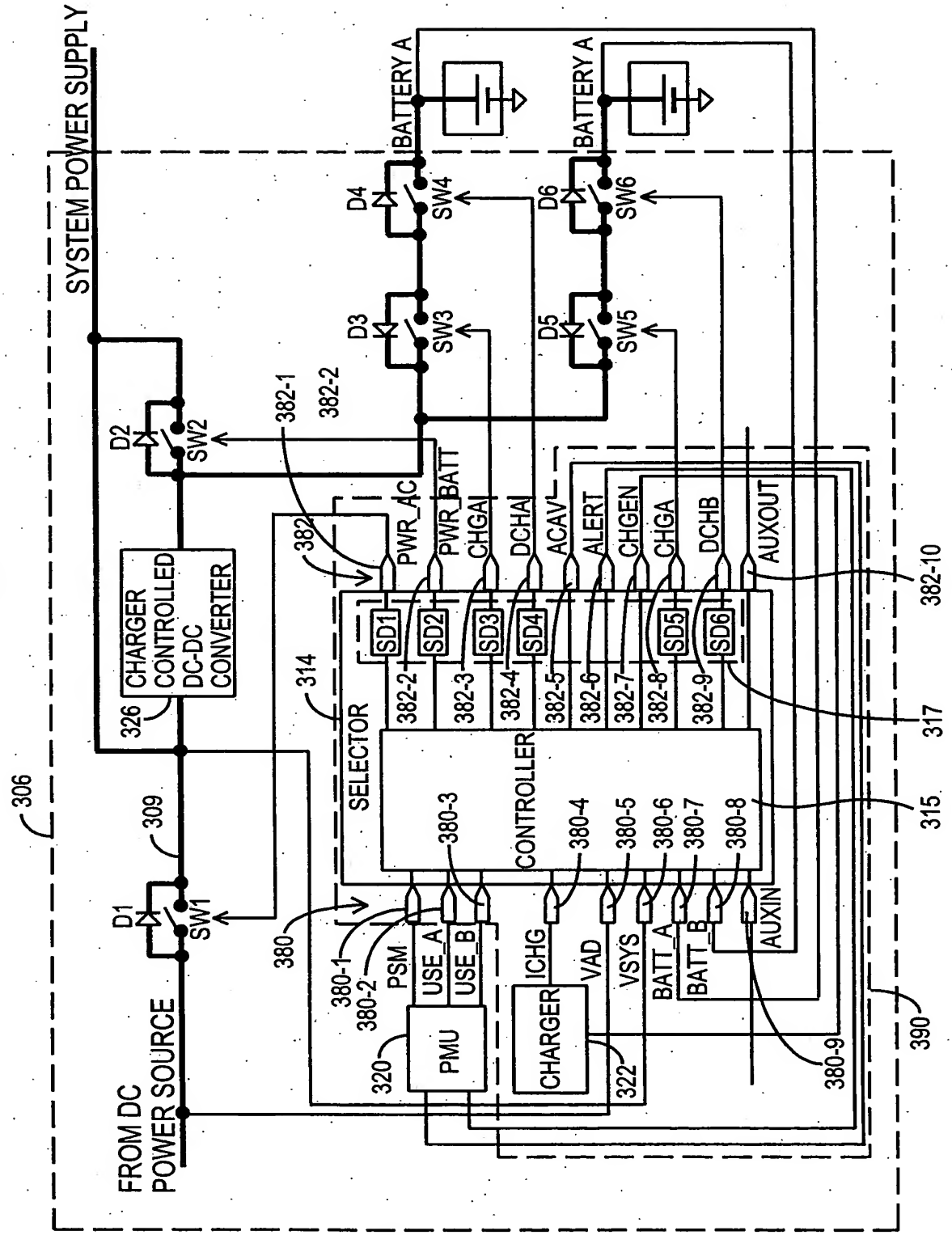

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FIG. 4

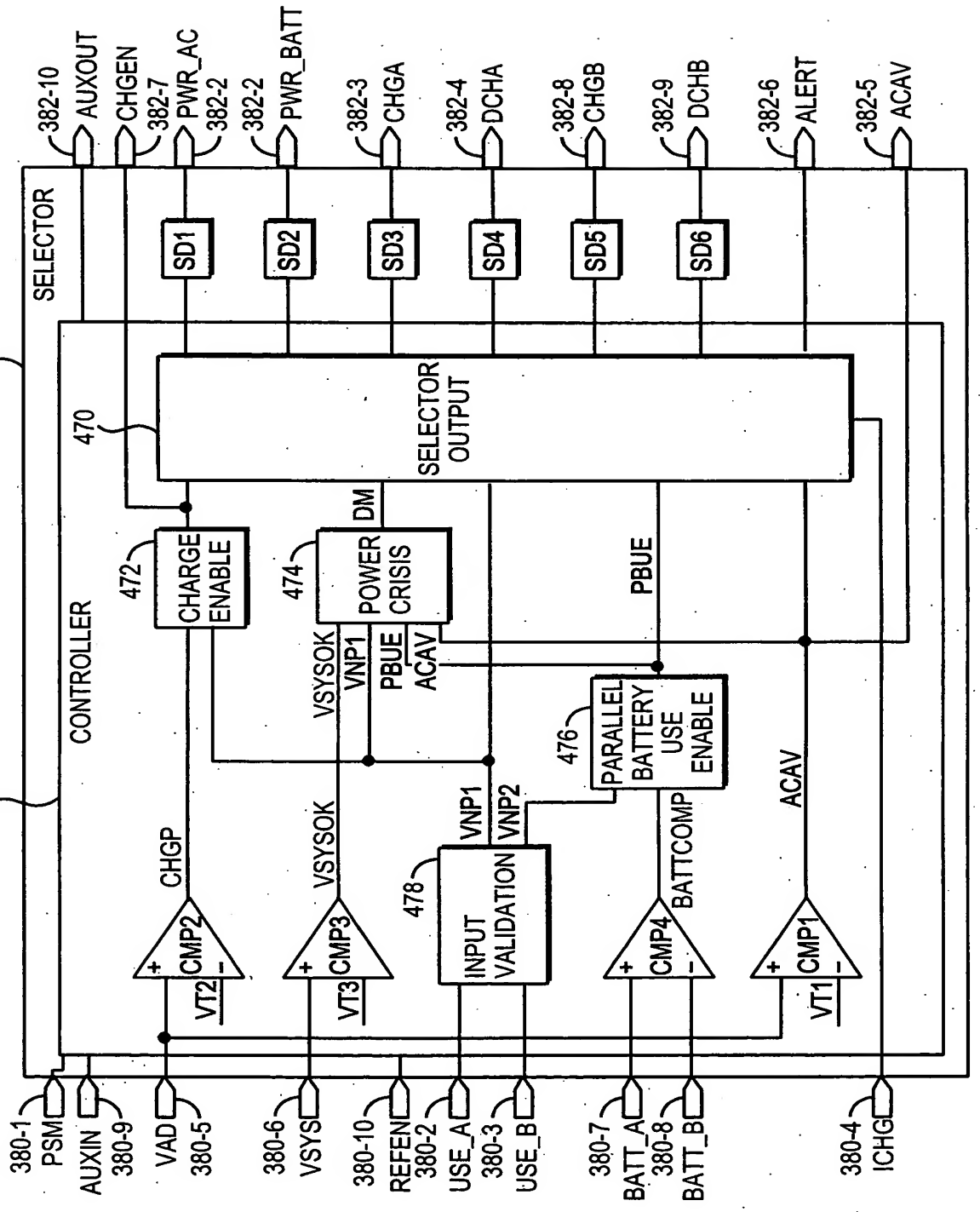

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FIG. 5

500

	USE SIGNALS INDICATE BATTERY A		USE SIGNALS INDICATE BATTERY B		USE SIGNALS INDICATE BATTERY A AND B IN PARALLEL						USE SIGNALS INDICATE NEITHER BATTERY A OR B
	502	504	506	508	510	512	514	516	518	520	522
SIGNAL STATES											
USE_A	LOW	LOW	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH
USE_B	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH
LOWER VOLTAGE BATTERY	X	X	X	X	X	X	A	A	B	B	X
CHARGING CURRENT SIGNAL	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
VINP1	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	LOW
CHGEN	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	LOW
PBUE	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW
SWITCH STATES											
SW1	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
SW2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SW3	ON	ON	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF
SW4	OFF	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
SW5	OFF	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF
SW6	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	ON	OFF

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FIG. 6

600

	602	604	606
SUPPLY MODE	NBSSM1	NBSSM1	NBSSM2
TARGETED SUPPLY BATTERY	A	B	A+B
VINP1	HIGH	HIGH	HIGH
VINP2	LOW	LOW	HIGH
BATTCOMP	X	X	HIGH
PBUE	LOW	LOW	HIGH
SW1	OFF	OFF	OFF
SW2	ON	ON	ON
SW3	ON	OFF	ON
SW4	ON	OFF	ON
SW5	OFF	ON	ON
SW6	OFF	ON	ON

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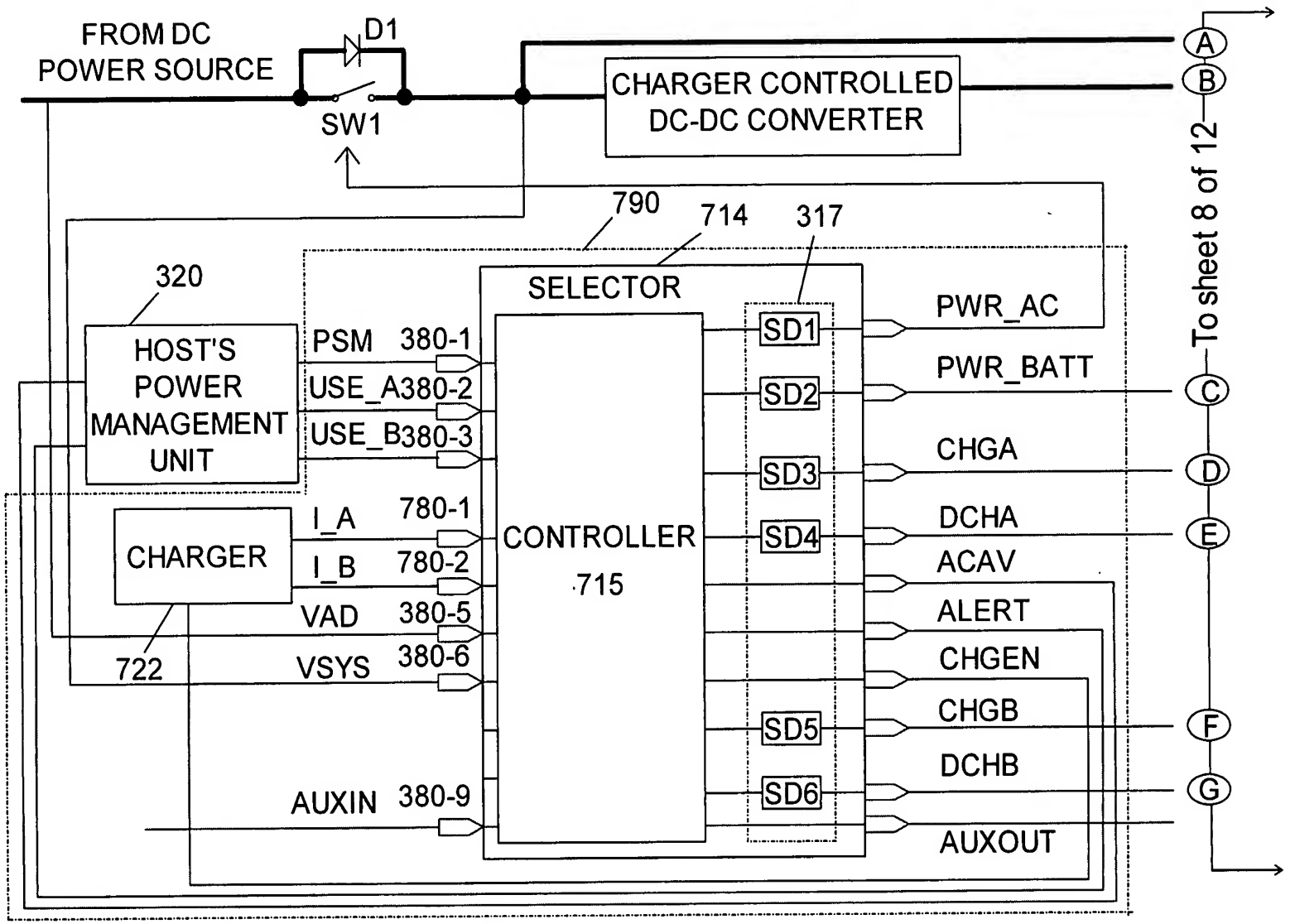

FIG. 7

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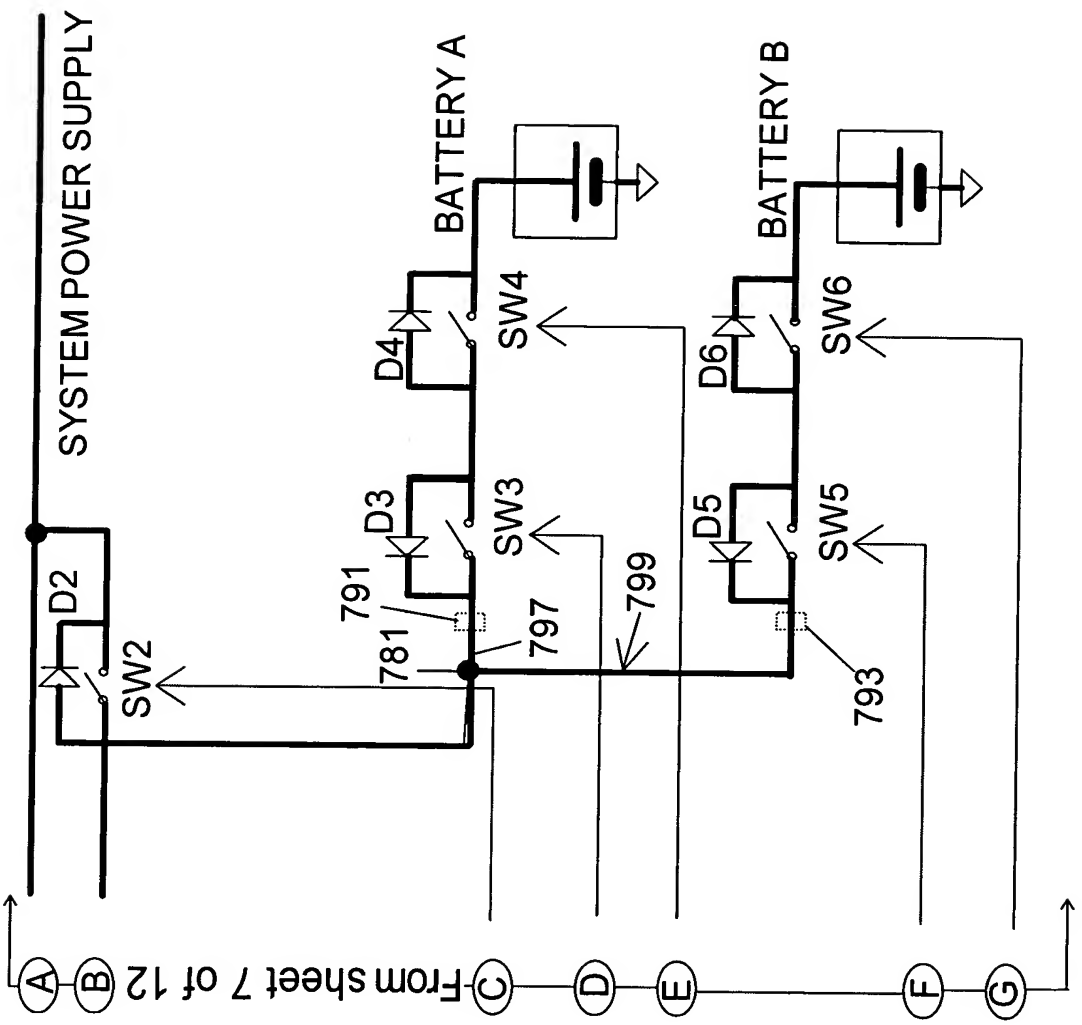

FIG.7Continued

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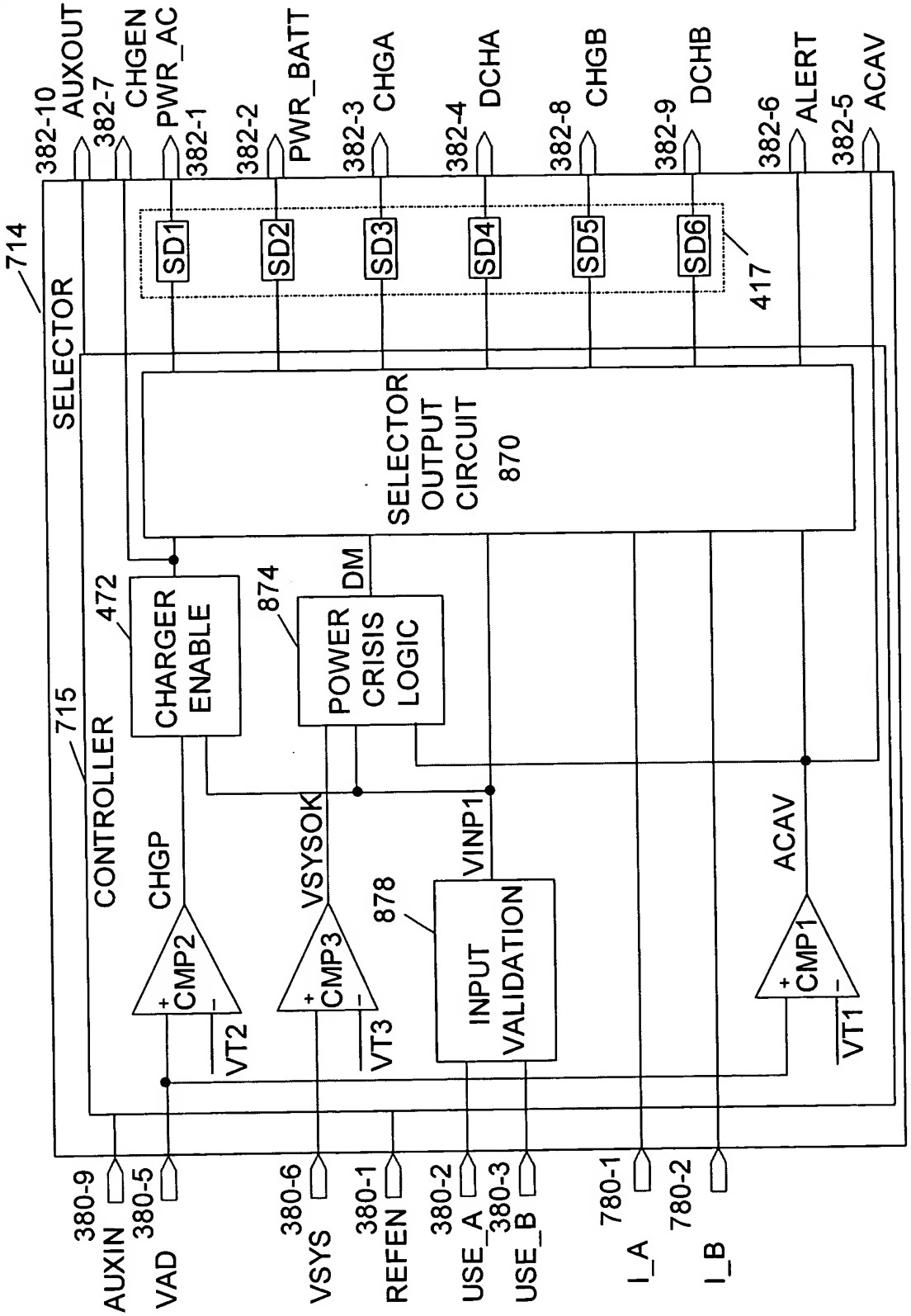

FIG.8

900

	USE signals indicate Battery A		USE signals indicate Battery B		USE signals indicate Battery A and Battery B in parallel				USE signals indicate neither Battery A or Battery B
Signal States	902	904	906	908	910	912	914	916	918
USE_A	Low	Low	High	High	Low	Low	Low	Low	High
USE_B	High	High	Low	Low	Low	Low	Low	Low	High
Battery A current signal	Low	High	Low	Low	Low	High	Low	High	Low
Battery B current signal	Low	Low	Low	High	Low	Low	High	High	Low
VINP1	High	High	High	High	High	High	High	High	Low
CHGEN	High	High	High	High	High	High	High	High	Low
Switch States									
SW1	ON	ON	ON	ON	ON	ON	ON	ON	ON
SW2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SW3	ON	ON	OFF	OFF	ON	ON	ON	ON	OFF
SW4	OFF	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
SW5	OFF	OFF	ON	ON	ON	ON	ON	ON	OFF
SW6	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	OFF

FIG.9

1000

	USE signals indicate Battery A		USE signals indicate Battery B		USE signals indicate Battery A and Battery B in parallel			
Signal States	1002	1004	1006	1008	1010	1012	1014	1016
USE_A	Low	Low	High	High	Low	Low	Low	Low
USE_B	High	High	Low	Low	Low	Low	Low	Low
Battery A current signal	Low	High	Low	Low	Low	High	Low	High
Battery B current signal	Low	Low	Low	High	Low	Low	High	High
VINP1	High	High	High	High	High	High	High	High
Switch States								
SW1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SW2	ON	ON	ON	ON	ON	ON	ON	ON
SW3	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
SW4	ON	ON	OFF	OFF	ON	ON	ON	ON
SW5	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
SW6	OFF	OFF	ON	ON	ON	OFF	ON	ON

FIG.10

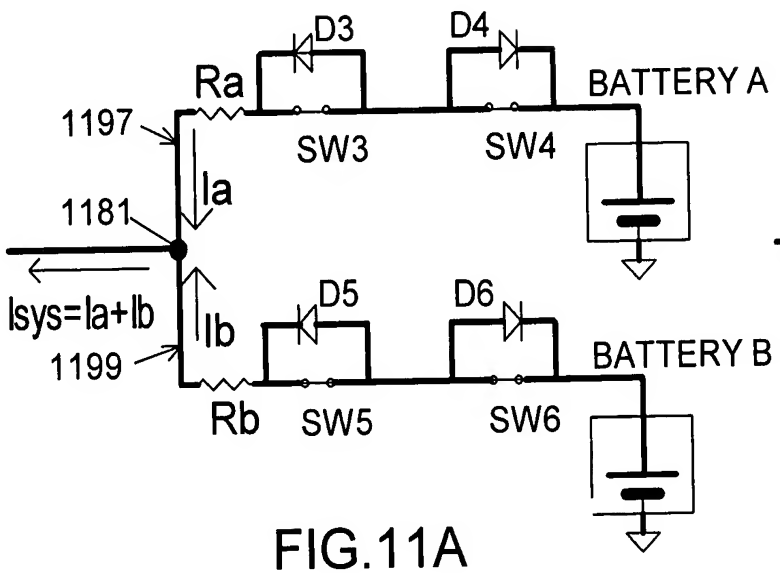

FIG.11A

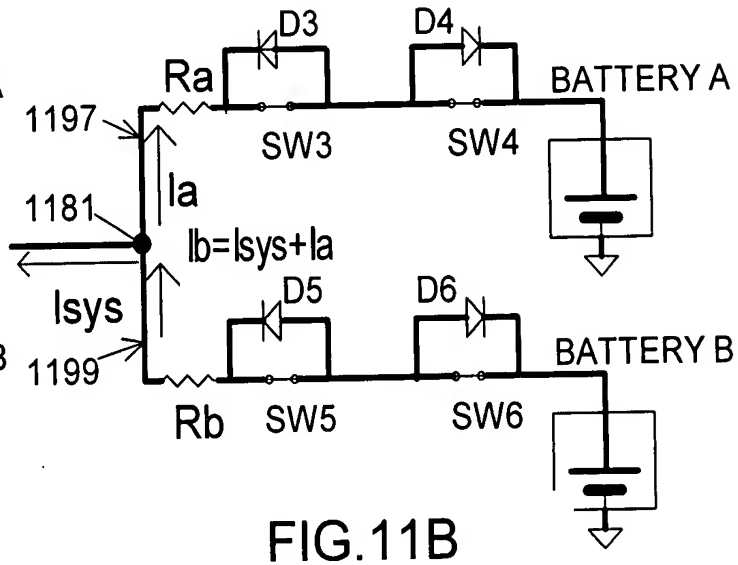

FIG.11B

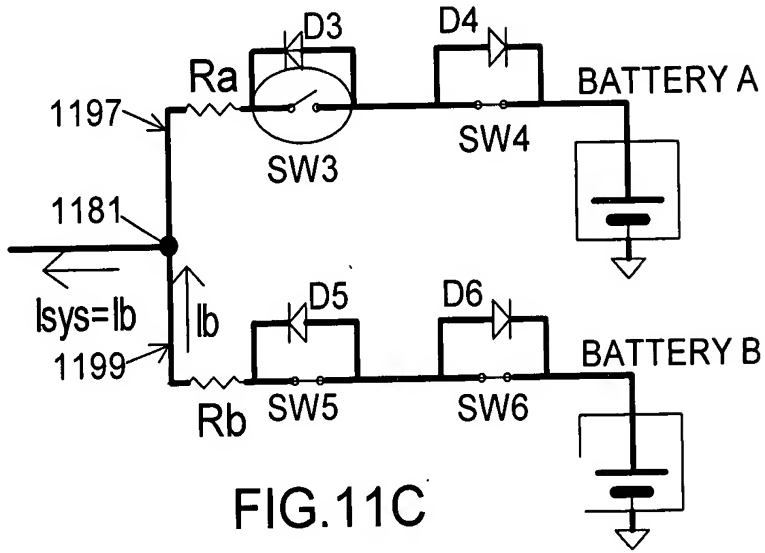

FIG.11C